

Posted: _____

**U.S. Department of the Interior
Bureau of Land Management
Kremmling Field Office
P.O. Box 68
Kremmling, CO 80459**

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-120-2008-52-EA

PROJECT NAME: Pole Mountain 3DGeophysical - Survey Phase II

LEGAL DESCRIPTION: T. 6 N., R. 80 and 81 W
T. 7 N., R. 80 and 81 W

APPLICANT: Green River Energy Resources

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction/Issues and Concerns: Three-dimensional (3D) geophysical surveys provide data needed to develop 3D images of geologic structure and stratigraphy underlying a prospective project area. 3D images are often referenced when the potential mineral resources of an area are being evaluated. Definitive evaluations of an area's mineral resources reduce the potential for non-productive wells and unnecessary construction disturbance. Between January and March of 2008, Green River Energy Resources conducted a geophysical survey of the Pole Mountain area of Jackson County, Colorado. The Proposed Action is a continuation of the initial survey.

Proposed Action: Green River Energy Resources (GRER) proposes to conduct Phase II of an exploratory, three-dimensional (3D), geophysical survey of the Pole Mountain area of Jackson County, Colorado. The total project area would encompass 28,401 acres, approximately 21.65% of which, or 6,150 acres would be on BLM-administered public lands (see project area map below). GRER would commence work in June of 2008 and the project would be completed in October of 2008. GRER would drill 4,300 shot holes on federal (BLM and U.S Fish and Wildlife administered lands), state and private lands; 930 shot holes would be on BLM-administered public lands. The project would create about 950 acres of disturbance, of which about 180 acres would be on BLM-administered public lands. The following is a summary of the proposed operational schedule.

Phase 1, Surveying and Permitting, would take place in June of 2008. A land survey crew would locate and place temporary pin flags and access flagging using a high-accuracy GPS. This work would be completed on foot, using all-terrain-vehicles (ATVs) where terrain would permit.

Phase 2, Drilling Operations, would take place in early August 2008. Drilling would be conducted using buggy drills and, possibly, heliportable drills. All shotholes would be bored to a depth of 25-to-40 feet and loaded with an explosive charge of 5 pounds developed specifically for seismograph operations.

Phase 3, Recording, would take place in August and September 2008. Recording equipment would be transported to the field and to staging areas by truck using existing roads and trails. One helicopter would be used for the recording operation and would operate only in daylight hours ferrying the receiver-station cache bags. Methods of generating sonic energy sources would primarily rely on shotholes, but other means of creating shock waves could be used.

Phase 4, Clean-up and Completion, would be completed in September/October 2008. After recording the source points, the recording equipment would be retrieved on foot and bagged, and moved to staging by helicopter in preparation for demobilization. All equipment would be gathered until complete.

Design Features of the Proposed Action:

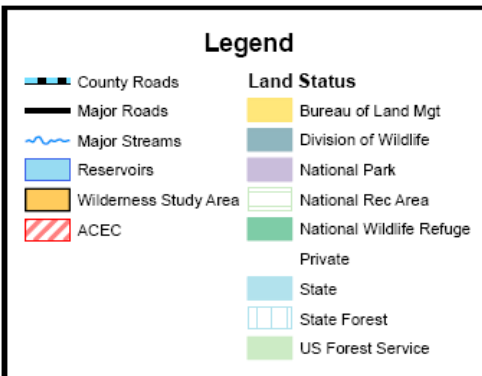
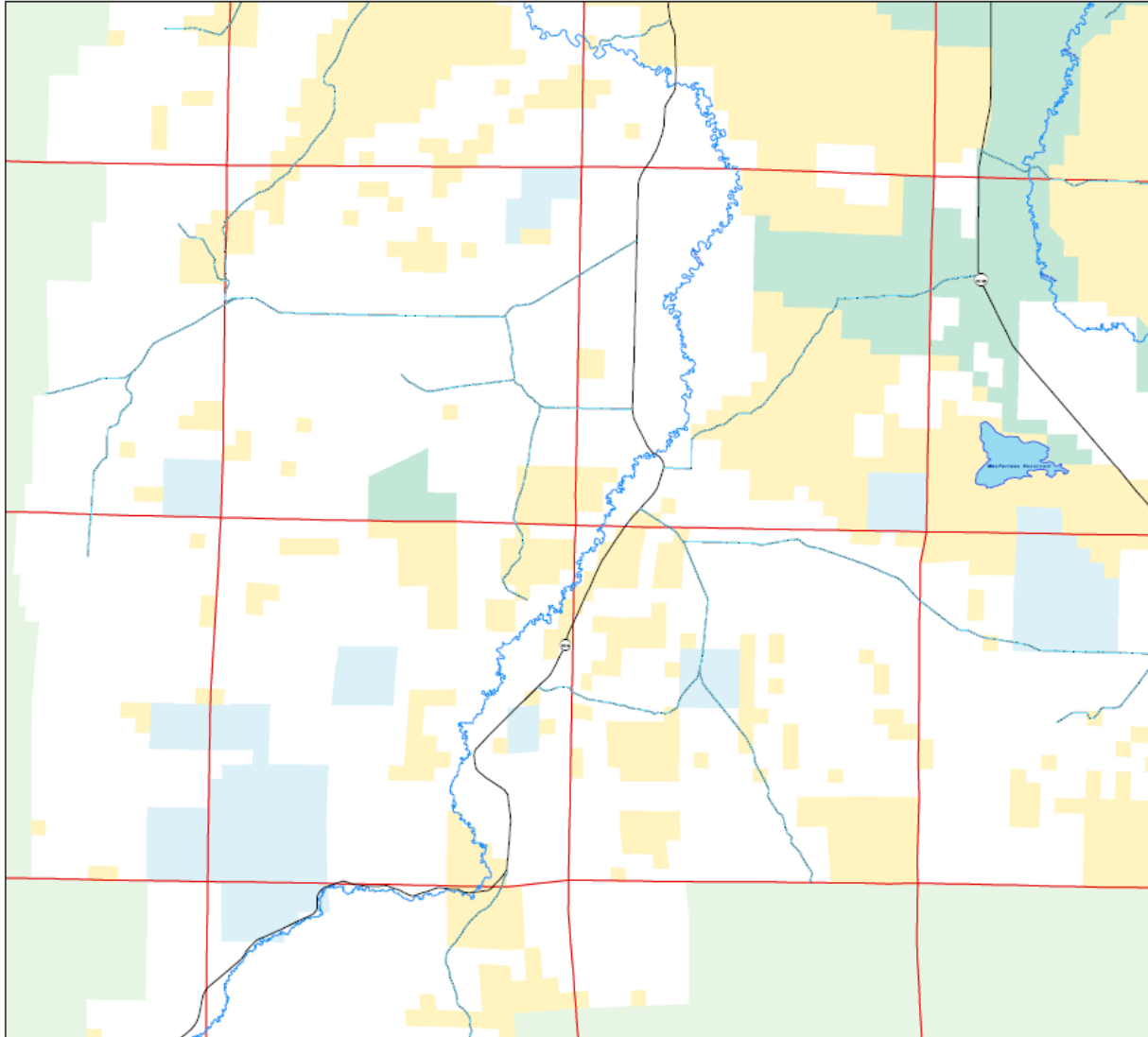
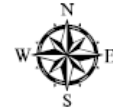
The standard terms and conditions included in BLM H-3150-1, Onshore Oil and Gas Geophysical Exploration Surface Management Requirements, are incorporated as part of the Proposed Action and would be followed (see Attachment 1).

The BLM would monitor the project area for the establishment or spread of invasive, non-native species after the project is completed. If invasive, non-native species become established or spread as a result of the Proposed Action; GRER would be responsible for their control.

Project Area Map:



Project Area: Pole Mountain Phase 2



0 0.5 1 2 Miles

1:153,239

No Warranty is made by the Bureau of Land Management as to the Accuracy, Reliability, or Completeness of this Data for Individual Use or Aggregate Use with Other Data.

Maps:
BLM, Kremmling FO 06/02/2008

No Action Alternative: The No Action Alternative would be to deny GRER the approval needed to conduct the 3-D Geophysical Survey. GRER would not acquire the data from public lands needed to develop a 3-D image of the geologic structure and stratigraphy underlying the area around Pole Mountain.

PURPOSE AND NEED FOR THE ACTION: The BLM is responding to a Notice of Intent for geophysical exploration from GRER.

There is a need to consider the application to allow GRER to obtain data necessary for the development of a 3-D image of the geologic structure and stratigraphy underlying the proposed project area. Development of a 3-D image would provide useful information to GRER and their affiliates to determine what locations within the project area have the highest potential for productive development of fluid minerals.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with (43 CFR 1610.5, BLM 1617.3) the following plan:

Name of Plan: Kremmling Resource Management Plan (RMP), Record of Decision (ROD)

Date Approved: December 19, 1984; Updated February 1999

Decision Number/Page: II, B.1, Page 5

Decision Language: Objective is “(t)o maximize the availability of the federal mineral estate for mineral exploration and development.”

Standards for Public Land Health: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. The following are the approved standards:

Standard	Definition/Statement
#1 Upland Soils	Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.
#2 Riparian Systems	Riparian systems associated with both running and standing water, function properly and have the ability to recover from major surface disturbances such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.
#3 Plant and Animal Communities	Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat’s potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.
#4 Threatened and Endangered Species	Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.
#5 Water Quality	The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by

	the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-degradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.
--	--

Because a standard exists for these five categories, a finding must be made for each of them in the environmental analysis. These findings are located in specific elements below or in the Interdisciplinary Team Analysis Review Record and Checklist (IDT-RRC) (Appendix 1).

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

CRITICAL ELEMENTS: The following critical elements were evaluated and determined that they were not present or that there would be no impact to them from the Proposed Action or No Action Alternative: Air Quality; Areas of Critical Environmental Concern; Environmental Justice; Native American Religious Concerns; Farmlands- Prime and Unique; Floodplains; Wastes, Hazardous or Solid; Wild and Scenic Rivers; and Wilderness. See IDT-RRC in Appendix 1 for further information.

The following critical elements were determined to be potentially impacted and were carried forward for analysis from the IDT-RRC in Appendix 1.

CULTURAL RESOURCES

Affected Environment: A Letter Report has been filed documenting the results of a cultural resource inventory for Report #CR-08-4. The survey covered 1203 acres of BLM administered surface lands, 98 acres of U.S. Fish and Wildlife Service administered land, and about 90 acres of State administered surface lands, for a total of 1,391 acres inventoried at Class III. The results of the survey located a total of 16 cultural resource finds. Of the 16 findings 10 are newly recorded, four are previously recorded sites, and two are new isolated finds. Of the 14 total sites recorded, five are lithic scatters, four are ‘open camps’ containing both lithics and thermally altered stone, three are stone circle sites containing lithics and thermally altered stone, one consists of a single atypical prehistoric rock built feature, and one is comprised of an historic cable tool drill location with associated historic debris.

One site, 5JA202, was previously recorded as two separate loci separated by a small wash. Site 5JA202a is now a part of site, 5JA1882, as its new designated site number, and is not eligible for the National Register of Historic Places. The other portion of site 5JA202 is now identified as site 5JA1886 and is eligible to the National Register of Historic Places.

Environmental Consequences: Drilling holes for explosives and detonating the explosives, along with associated surface disturbance created by ATVs, drill rigs, and other vehicles, could damage or destroy cultural sites. If those sites were damaged or destroyed, the potentially recoverable scientific information relating to the history and prehistory of the area from the sites would be lost.

Mitigation: The project should avoid sites 5JA1889, 5JA1891, 5JA1892, and 5JA1893 by 500 feet because these sites contain prehistoric rock built features. Site 5JA1886 (5JA202) already has a live dynamite charge in a drill hole and must be accessed on foot. The site should be avoided by 200 feet. All sites will be monitored and re-inspected by GRER's Archaeological consultant. Because all eligible sites will be avoided, the project will have no effect on cultural resources and no historic properties would be affected.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: There are no known invasive, non-native species (noxious weeds) growing in the project area. However, any soil or vegetation disturbing activities provide an avenue for the establishment or expansion of invasive, non-native species.

Environmental Consequences: Surface disturbance would be caused by drilling and exploding the shot holes and associated activities. These areas of disturbance would be susceptible to the invasion or spread of invasive, non-native species.

MIGRATORY BIRDS

Affected Environment: The proposed project is located over a large area encompassing primarily sagebrush and riparian habitat. Important migratory birds expected to inhabit the project site include horned larks, red-tail hawks, sage thrashers, Eastern Kingbirds, Killdeer, common nighthawks, Say's phoebes, green-tailed towhees, and western bluebirds.

Environmental Consequences: The noise and heavy equipment associated with proposed project could temporarily displace migratory birds nesting in the area and/or crush nests in the path of the buggy drills or other equipment traveling over sagebrush.

Mitigation: Operations would not occur during the peak migratory bird nesting period: May 1st to July 15th.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES (includes a finding on Standard 4)

Affected Environment: A list of threatened, endangered, and candidate species which could inhabit the proposed project area was received from the U.S. Fish and Wildlife Service (USFWS) March 28, 2008. Analysis of this list indicated that no listed species would be impacted by the proposed project.

Greater sage-grouse, a BLM designated sensitive species, use the project area in spring through the fall months for breeding and raising young. A smaller part of the project area (the east half of section 28 T7N R80W) is used in winter.

Environmental Consequences: The noise and heavy equipment associated with the proposed project could temporarily displace sage-grouse nesting in the area and/or crush nests in the path of the buggy drills or other equipment traveling over sagebrush. In order to protect sage-grouse during critical periods of their life requirements, the following mitigation is proposed.

Mitigation: No operations would be allowed on BLM-administered public lands from March 1st (or when breeding sites start to become occupied—usually as snow melts off) to June 30th.

Finding on the Public Land Health Standard for Threatened & Endangered species: The project should not affect the ability of the public land affected to meet the Colorado Standards for Public Land Health.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: The Proposed Action is located within the North Platte River Basin. Most of the project is located within the Grizzly Creek 5th Order Watershed that is tributary to the North Platte River. Township 7 N., R. 81 W., however, is primarily within the Upper North Platte River 5th Order Watershed. There are approximately 14 perennial streams, and numerous intermittent and ephemeral streams in the project area. The state has designated these streams for Aquatic life- coldwater recreation- class 1a, water supply, and agriculture. Although most of the streams are considered to be fully supporting the designated uses, there are two main streams that are on the Monitoring and Evaluation List (revised 4/3/0/2008). Grizzly and Little Grizzly Creeks are on the List for possible “aquatic life” impairment. Little Grizzly Creek is also identified for possible E. coli and Fe (trec) concerns. The Monitoring and Evaluation List identifies water bodies where there is reason to suspect water quality problems, and there is also uncertainty regarding one or more factors, such as the representative nature of the data. Water bodies that are impaired are also placed on the Monitoring and Evaluation List., when it is unclear whether the cause of impairment is attributable to pollutants as opposed to pollution. Both Grizzly Creek and Little Grizzly Creek have been identified for sediment concerns and aquatic life concerns for many years. The BLM monitors water quality upstream of the proposed action, but due to the ownership pattern, does not sample downstream. Iron concerns are generally associated with industrial or mining activities, or are a result of the area’s geology. Little Grizzly Creek does drain old mining and energy areas.

The actual 48 sections mapped for the seismic lines do not include any known developed springs or water wells on BLM lands. Attached to this report is a map of known BLM water and wetland concerns within the proposed project area (Attachment 2).

Environmental Consequences: The various activities associated with the project could affect surface water, but are not expected to affect ground water, unless ground water occurs within 40 feet of the surface. Actual geophysical lines are not expected to affect surface water sources because only foot traffic would be allowed in wetland or swampy areas. Soil erosion resulting from drilling shot holes or from vehicle use could affect the quality of surface water in the project area. The use of surface water to support the project could deplete slowly-recharging water sources or cause deterioration in surface water quality.

Mitigation: The proponent would limit surface disturbances and use existing roads wherever possible. Wetland and riparian areas would be avoided, with no motorized vehicles allowed in those areas. Shot holes would be plugged in a manner to protect ground water quality, if encountered. If any unmapped water sources are found during surveying or seismic operations, every effort should be made to avoid these areas. Any water needs for seismic

operations must be obtained from private sources. No fluids would be allowed to be disposed on federal lands.

Finding on the Public Land Health Standard for water quality: The Proposed Action would occur within watersheds that are considered to be meeting the Standard for water quality.

WETLANDS & RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: The Proposed Action is in areas where several of the draws or swales support wetland vegetation, and at least two inventoried mire complexes have been identified. Wetland and riparian areas, especially on public lands, are limited in acreage but provide significant resource values. A map of known wetlands and riparian areas is attached to this document.

Environmental Consequences: Surface disturbance created by the various activities associated with the project could damage sensitive wetland and riparian areas. If damaged, habitat for wildlife, water quality and quantity, and the special values of the mire complexes may be slow to recover or could be lost completely. There would be no impacts under the No Action Alternative.

Mitigation: All motorized equipment would avoid wetland and riparian areas. Any lines that cross these areas will be hand laid, and shot holes will be located away from spring sources.

Finding on the Public Land Health Standard for riparian systems: Most of the known areas are considered to be meeting the standard or moving towards meeting the standard. The areas are generally functioning hydrologically, but some areas are at risk due to livestock utilization levels. The Proposed Action, with required avoidance, will allow all the areas to continue to meet or improve to meet the Standard. Under the No Action Alternations, all the areas will be able to continue to meet or improve to meet the Standard.

NON-CRITICAL ELEMENTS: The following non-critical elements were determined to be potentially impacted and were carried forward for analysis from the IDT-RRC in Appendix 1.

SOILS (includes a finding on Standard 1)

Affected Environment: The Jackson County Soil Survey maps the entire project area. The area includes many soil mapping units, with various characteristics. The most common range sites within the areas on public lands are valley benches and dry mountain loams, but there are also areas of salt flats, alkaline slopes, mountain meadows, deep clay loams, rocklands, and cryorthents. Most of the roads on BLM-administered lands are user created and do not have adequate drainage. This results in some routes have poor conditions, which result in ruts, widened or multiple routes, and adjacent gullies.

Environmental Consequences: Cross-country travel during the project could cause compaction in some soil types, especially when soils are wet. When soils are wet, ruts could be created by repeated travel over the same sites. Wind or water erosion could be accelerated by the use of vehicles in fragile soils, which in worst-case situations could affect air or water quality or the ability of native plants to remain viable. By minimizing cross country travel, the proposed

action helps reduce impacts to soil resources. This would also include staging area use. If areas of rutting do occur, the operator is responsible for blading the roads. Off road areas such as staging areas may need to be ripped if excessive compaction or rutting has occurred prior to reseeded. The No Action Alternative would not impact soil resources.

Mitigation: Operations will cease except on graveled maintained roads when soil conditions are wet and rutting is occurring. Damage created by vehicles would be repaired by the proponent (see Attachment 1 , items 4, 5, and 13).

Finding on the Public Land Health Standard for upland soils: The Proposed Action would not impact the area's ability to meet the Standard.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The vegetation within the proposed project area is a mixture of sagebrush with an understory of grasses and forbs

Environmental Consequences: The proposed project would impact 180 acres of native vegetation on BLM-administered lands. Surface disturbance from drilling shot holes and vehicle use is likely to damage some vegetation, which will result in loss of habitat for some species of wildlife and reduce forage available for livestock. Repeated vehicle use over the same ground would produce user-created trails that could eventually evolve into routes used by the public, where none exist now. If these user-created trails remain, additional vegetation damage and creation of additional routes would be expected over time. Overall, however, the potential loss of some amount of vegetation on the 180 affected acres should not be significant in the context of the larger project.

Mitigation: Any user created roads created during the project would be reseeded and reclaimed.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The project should not affect the ability of the public land affected to meet the Colorado Standards for Public Land Health

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: Several small ponds and intermittent drainages are scattered through the project area. Waterfowl and other aquatic species use these wet areas seasonally--spring through early summer as long as water is available.

Environmental Consequences: The noise and heavy equipment associated with proposed project could temporarily displace waterfowl and other aquatic wildlife in the vicinity of the project area. However, since the project is expected to occur late in the summer and into fall, impacts to these species are expected to be minimal since many of the water sources will be dry.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): The project should not affect the ability of the public land affected to meet the Colorado Standards for Public Land Health.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The proposed project area provides habitat for a variety of species including mule deer, Rocky Mountain elk, moose, pronghorn, and a variety of small mammals. Much of the project area is designated as winter range for big game animals. Elk use the area in the southwest, pronghorn use the area to the northeast, and moose use the riparian corridors through most of the project including Pole Mountain in the southwest corner. Coyotes, badgers, white-tail prairie dogs, and several other species of rodents are yearlong residents of the proposed project area.

Environmental Consequences: Operations may have potential direct impacts by temporarily displacing animals (especially large concentrations of elk) causing undue stress on animals

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The project should not affect the ability of the public land affected to meet the Colorado Standards for Public Land Health

LANDS/REALTY AUTHORIZATIONS

Affected Environment: There are no leases or permits in the proposed project location. There are, however, many rights-of-way authorized for this location, which are listed in Table 1.

Table 1: Exiting Rights-of-Way in the Proposed Project Area

SERIAL NUMBER	ROW HOLDER	AUTHORIZED ACTIVITY
COC 08481	Mountain Parks Electric	Overhead Powerline
COC 08482	Mountain Parks Electric	Overhead Powerline
COC 09620	U.S. Forest Service	Access Road
COC 25110	CenturyTel of Eagle	Buried Telephone Cable
COC 26524	Mountain Parks Electric	Overhead Powerline
COC 30278	Jackson County	County Road 28
COC 56807	CenturyTel of Eagle	Buried Telephone Cable
COC 59474	Blaine Evans	Ditch
COC 60905	Markus Productions	Oil Well
COC 61019	Blaine Evans	Access Road
COC 62185	Mountain Parks	Overhead Powerline
COC 63796	Russell Clinton	Access Road
COC 66131	CenturyTel of Eagle	Buried Fiber Optics
COC 67953	Mountain Parks Electric	Overhead Powerline
COC 0 109984	CenturyTel of Eagle	Overhead Telephone Line

Environmental Consequences: The various activities associated with the proposed action could affect facilities (e.g., roads, power lines ditches) that the BLM has authorized. Damage to facilities could occur, or the authorized activities of ROW holders could be affected by the project.

Mitigation: GRER would contact each right-of-way holder prior to commencing the project so as to avoid impacting their rights-of-way (see Attachment #2, item 3).

PALEONTOLOGY

Affected Environment: The project area is geologically mapped as Coalmont Formation, Pleistocene age gravels and alluvium, and Holocene age gravels and alluvium. The Holocene deposits are not considered old enough to produce fossils. The Coalmont and Pleistocene Formations (fm.) are given a Potential Fossil Yield Classification of 3 and Condition 2. These classifications indicate the formations have a yield content that varies in significance, abundance and predictability, with a moderate potential to yield significant fossils. The Coalmont fm. is believed to have a higher potential for the discovery of significant fossil resources than does the Pleistocene gravels and alluvium (see Attachment 1 for a letter report prepared by Dr. Gus Winterfeld of Erathem-Vanir, 2008).

Environmental Consequences: Drilling holes for explosives and detonating the explosives, along with associated surface disturbance created by ATVs, drill rigs, and other vehicles, could damage or destroy fossils. If fossils present in the project area were damaged or destroyed, the potentially recoverable scientific information relating to the geologic history and formation of the landscape in North Park would be lost.

Mitigation: The proposed project area would be pre-surveyed using maps and air photos to identify prospective bed rock outcrops, and would include a drive through to field check the identified areas and identify other areas that have bed rock exposures of the Coalmont and Pleistocene fm. This review would include both BLM-administered and split-estate lands.

A pedestrian inventory would be completed for both BLM-administered and split-estate lands for identified bed rock exposures correlated with those areas identified for shot holes, staging and ground disturbance.

Any identified shot points for the project that would have an impact on fossil resources would be relocated or abandoned.

CUMULATIVE IMPACTS SUMMARY: The area affected by the recently completed Phase I of the Pole Mountain 3-D Geophysical Survey and Phase II (the Proposed Action) is either relatively undisturbed rangeland on public and private lands or irrigated hay fields on private lands. The primary impacts from the proposed action will be a minimal amount of surface disturbance, including soil disturbance and damage to vegetation, from drilling shot holes and associated vehicle use. The effect of the proposed action on the irrigated lands would be essentially negligible, since those lands already are disturbed. Evidence of any project-caused disturbance would be eliminated during the next season's planting. Disturbance on public and private rangelands generally will not be actively reclaimed after the project, unless there is some unexpected significant disturbance. Thus, for the next few years, there may be evidence of vegetation damage and soil disturbance. Because the BLM-administered lands comprise only about one-fifth of the current project (and only about 10 percent of Phase I), authorizing GRER

to conduct geophysical exploration on public lands will not produce a significant cumulative or long-lasting impact.

PERSONS / AGENCIES CONSULTED: The Ute Mountain Ute (Colorado), the Shoshone and Northern Arapaho (Wyoming), Southern Ute (Colorado) and Uinta-Ouray Ute (Utah) tribes were offered the opportunity to comment on the proposed action. No comments were received. Representatives of the U.S. Fish and Wildlife Service, Arapaho National Wildlife Refuge were involved in scoping. The USFWS will address the project through its own administrative procedures.

INTERDISCIPLINARY REVIEW: See IDT-RRC in Appendix 1.

FONSI

CO-120-2008-52 EA

Based on the analysis of potential environmental impacts contained in the attached environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the Proposed Action will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

DECISION RECORD

DECISION: It is my decision to authorize the Proposed Action as described in the attached EA.

“This decision is contingent on meeting all mitigation measures and monitoring requirements listed below.”

RATIONALE: The decision to authorize Phase II of the Pole Mountain 3-D Geophysical Survey was made so that GRER would be able to obtain data needed to develop a 3-D image of the geologic structure and stratigraphy underlying the proposed project area. The proposed project location is in an area determined as having a high potential for oil and gas development. By authorizing the proposed action, it would be possible for GRER to develop a geological 3-D image of the project area. A 3-D image would provide useful information to GRER and their affiliates in determining which locations within the project area have a high potential for productive fluid mineral development, thus significantly reducing unnecessary surface disturbance from non-productive fluid mineral exploration. Phase II is in continuation of the Phase I Pole Mountain 3-D Geophysical Survey which was authorized in the winter of 2007. The proposed action conforms with the 1984 Kremmling RMP and the 1999 Kremmling RMP Update.

MITIGATION MEASURES:

Wildlife/Threatened and Endangered Species:

Operations will not occur during the peak migratory bird nesting period: May 1st to July 15th.

In order to protect sage-grouse during critical periods of their life requirements, no operations will be allowed on BLM from March 1st (or when breeding sites start to become occupied—usually as snow melts off) to June 30th.

Water, Soil, and Wetlands:

If any unmapped water sources are found during surveying or seismic operations, then every effort should be made to avoid these areas.

All water needs for seismic operations must be obtained from private sources and no fluids will be disposed of on federal lands.

All motorized equipment will avoid springs, wetland and riparian zones. Any lines that cross these areas will be hand laid, and shot holes will be located away from spring sources.

Operations will cease except on graveled maintained roads when soil conditions are wet and rutting is occurring.

If areas of rutting do occur, the operator is responsible for blading the roads. Off road areas such as staging areas may need to be ripped if excessive compaction or rutting has occurred prior to reseeding.

Special Paleontological Stipulations:

A preliminary review of the Pole Mountain Phase I and II project areas will be pre-surveyed using maps and air photos to identify prospective bed rock outcrops, and will include a drive through to field check the identified areas and identify other areas that have bed rock exposures of the Coalmont and Pleistocene fm. This review will include both BLM and split-estate lands.

A pedestrian inventory will be completed for Phase I on BLM lands for identified bed rock exposures correlated with those areas identified for shot holes, staging and ground disturbance. This inventory will examine the effects of seismic work on fossil resources, if any, for the Pole Mountain Phase I. For phase II, a pedestrian inventory will be completed for both BLM and spit-estate lands for identified bed rock exposures correlated with those areas identified for shot holes, staging and ground disturbance.

Any identified shot points for Phase II that will have an impact on fossil resources will be relocated or abandoned.

Standard Cultural & Paleontological Stipulations:

The holder shall immediately bring to the attention of the Authorized Officer any and all antiquities, or other objects of historic, paleontological, or scientific interest including but not limited to, historic or prehistoric ruins or artifacts DISCOVERED as a result of operations under this authorization (16 U.S.C. 470.-3, 36 CFR 800.112). The holder shall immediately suspend all activities in the area of the object and shall leave such discoveries intact until written approval to proceed is obtained from the Authorized Officer. Approval to proceed will be based upon evaluation of the object(s). Evaluation shall be by a qualified professional selected by the Authorized Officer from a Federal agency insofar as practicable (BLM Manual 8142.06E). When not practicable, the holder shall bear the cost of the services of a non-Federal professional.

Within five working days the Authorized Officer will inform the holder as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the holder will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,

- A timeframe for the Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the Authorized Officer are correct and that mitigation is appropriate.

If the holder wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the Authorized Officer will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the holder will be responsible for mitigation costs. The Authorized Officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the Authorized Officer that the required mitigation has been completed, the holder will then be allowed to resume construction.

Antiquities, historic, prehistoric ruins, paleontological or objects of scientific interest that are outside of the authorization boundaries but directly associated with the impacted resource will also be included in this evaluation and/or mitigation.

Antiquities, historic, prehistoric ruins, paleontological or objects of scientific interest, identified or unidentified, that are outside of the authorization and not associated with the resource within the authorization will also be protected. Impacts that occur to such resources, which are related to the authorizations activities, will be mitigated at the holder's cost.

Pursuant to 43 CFR 10.4(g), the holder of this authorization must notify the Authorized Officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the Authorized Officer.

COMPLIANCE/MONITORING:

The BLM will monitor the project area for the establishment or spread of invasive, non-native species after the project is completed. If invasive, non-native species become established or spread as a result of the Proposed Action; GRER will be responsible for their control.

All identified cultural sites will be monitored and re-inspected by GRER's Archaeological consultant.

NAME OF PREPARER: Kelly Hodgson

NAME OF ENVIRONMENTAL COORDINATOR: Joe Stout

DATE: August 6, 2008

SIGNATURE OF AUTHORIZED OFFICIAL: /s/ David Stout

DATE SIGNED: 8/6/08

ATTACHMENTS:

- 1) Stipulations
- 2) BLM Water and Wetland Concerns Map

APPENDICES:

Appendix 1 – Interdisciplinary Team Analysis Review Record and Checklist

INTERDISCIPLINARY TEAM ANALYSIS REVIEW RECORD AND CHECKLIST:

Project Title: Pole Mountain Geophysical Survey Phase II

Project Leader: Kelly Hodgson

Date Proposal Received: 5/27/08

Date Submitted for Comment: 6/9/08

Due Date for Comments: 7/17/08

Need for a field Exam: (If so, schedule a date/time)

Scoping Needs/Interested or Affected Publics: (Identify public scoping needs)

Consultation/Permit Requirements:

Consultation	Date Initiated	Date Completed	Responsible Specialist/ Contractor	Comments
Cultural/Archeological Clearance/SHPO	8/5/2008	8/5/2008	BBW	To date a letter report has been filed addressing the results of the Class III inventory and those results are discussed above.
Native American	6/3/2008	7/3/2008	B.Wyatt	To date no Native American tribe that was consulted, has identified any areas of traditional cultural concern.
T&E Species/FWS	N/A	N/A	M. McGuire	
Permits Needed (i.e. Air or Water)	N/A	N/A	P. Belcher	The Proposed Action does not indicate a surface disturbance of 1 acre, but if so, then the operator is responsible for a stormwater permit.

(NP) = Not Present

(NI) = Resource/Use Present but Not Impacted

(PI) = Potentially Impacted and Brought Forward for Analysis.

NP NI PI	Discipline/Name	Date Review Comp.	Initials	Review Comments (required for Critical Element NIs, and for elements that require a finding but are not carried forward for analysis.)
CRITICAL ELEMENTS				
NI	Air Quality Belcher	7/24/08	PB	Any emissions or dust would be very minor, short term, and very localized. There are no air quality impacts.
NP	Areas of Critical Environmental Concern J. Stout			There are no Areas of Critical Environmental Concern in the proximity of the proposed project area.
NI	Cultural Resources Wyatt	8/5/2008	BBW	See analysis above.
NP	Environmental Justice J. Stout			According to the most recent Census Bureau

				statistics (2000), there are no minority or low income communities within the Kremmling Planning Area.	
NP	Farmlands, Prime and Unique	Belcher	7/24/08	PB	There are no farmlands, prime or unique, in the proximity of the proposed project area.
NI	Floodplains	Belcher	7/24/08	PB	Flood hazard and floodplain functionality will not be impacted. See Wetland Section.
NP	Invasive, Non-native Species	Johnson Torma	6/23/08	MS	See analysis
PI	Migratory Birds	McGuire	7/15/08	MM	See analysis
NP	Native American Religious Concerns	Wyatt	7/3/2008	BBW	To date no Native American tribe that was consulted, has identified any areas of traditional cultural concern.
PI	T/E, and Sensitive Species (Finding on Standard 4)	McGuire	7/15/08	MM	See analysis
NP	Wastes, Hazardous and Solid	Hodgson	6/20/08	KH	There are no quantities of wastes, hazardous or solid, located on BLM-administered lands in the proposed project area, and there would be no wastes generated as a result of the Proposed Action or No Action alternative.
PI	Water Quality, Surface and Ground (Finding on Standard 5)	Belcher	7/24/08	PB	Finding: See water quality section.
PI	Wetlands & Riparian Zones (Finding on Standard 2)	Belcher	7/24/08	PB	Finding: See wetland and riparian section.
NP	Wild and Scenic Rivers	Sterin	7/14/08	BS	There are no eligible Wild and Scenic River segments in the proposed project area.
NP	Wilderness	Sterin	7/14/08	BS	There is no designated Wilderness or Wilderness Study Areas in the proximity of the proposed project area.
NON-CRITICAL ELEMENTS (A finding must be made for these elements)					
PI	Soils (Finding on Standard 1)	Belcher	7/24/08	PB	Finding: See Soil Section.
PI	Vegetation (Finding on Standard 3)	Johnson Torma	6/30/08	PT	Finding: See Vegetation section
PI	Wildlife, Aquatic (Finding on Standard 3)	McGuire	7/15/08	MM	See analysis
PI	Wildlife, Terrestrial (Finding on Standard 3)	McGuire	7/15/08	MM	See analysis
OTHER NON-CRITICAL ELEMENTS					
	Access/Transportation	Monkouski			
PI	Fire	Wyatt	7/3/2008	BBW	There is a potential for wildfire from mufflers or vehicles hitting rocks while conducting survey and geophysical work. All vehicles should carry as a minimum a shovel, a class A-B-C fire extinguisher with a minimum of one pound of retardant, or a container with a minimum of 5 gallons of water, in the event of an accidental start.
	Forest Management	Belcher			
NI	Geology and Minerals	Hodgson	6/20/08	KH	No impacts.
NI	Hydrology/Water Rights	Belcher	7/24/08	PB	No federal waters may be used for seismic operations. Operator is responsible for obtaining a legal water source that does not impact water right holders.
PI	Paleontology	Rupp	7/18/08	FGR	*See Paleontology section and Appendix I.
	Noise	Monkouski			
NI	Range Management	Johnson	6/30/08	PT	Grazing occurs on most BLM lands within the

	Torma			project area. The proposed action would have no impact to grazing.
PI	Lands/ Realty Authorizations Cassel	6/26/08	SC	See write up.
NI	Recreation Monkouski Sterin Windsor	7/14/08	BS	No impacts.
NI	Socio-Economics J. Stout			
NI	Visual Resources Hodgson	6/20/08	KH	No impacts.
	Cumulative Impact Summary J. Stout			
FINAL REVIEW				
	P&E Coordinator J. Stout			
	Field Manager D. Stout	8/6/08	DS	

Attachment 1

STIPULATIONS FOR Pole Mountain 3D Geophysical Survey Phase II

BLM Standard Terms and Conditions: H-3150-1- ONSHORE OIL AND GAS GEOPHYSICAL EXPLORATION SURFACE MANAGEMENT REQUIREMENTS (PUBLIC)

1. The operator shall contact the Kremmling Field Office at least 48 hours prior to the start of the project to schedule a pre-work conference. The crew supervisor and additional crew chiefs (if needed) will attend the pre-work conference to discuss the terms and conditions for this operation.
2. The operator's representative will attend a meeting with the BLM to discuss cultural artifacts and potential penalties for tampering with cultural artifacts. The meeting can be held as part of the pre-work conference.
3. The operator will obtain permission from right-of-way holders prior to drilling and setting charges within authorized limits of the rights-of-way.
4. Existing routes and trails will be used to the maximum extent possible. The heliportable drill or other BLM approved technique will be used on the areas with steep slopes and rough terrain. Attempts to traverse irregular, soft, or steep slopes and terrain by all vehicles and equipment shall be kept to a minimum to avoid excessive rutting, soil erosion, excessive crushing of vegetation, and excessive visual impacts. Vehicular travel along the flagged lines will be kept to a minimum and be in a zigzag pattern between source points to reduce straight line disturbances. This procedure does not apply to vehicles following trails or roads.
5. Vehicular travel shall be suspended when ground conditions are wet enough to cause rutting or other noticeable surface deformation and severe compaction. As a general rule, if vehicles or other project equipment create ruts in excess of four inches deep when traveling cross-country over wet soils, the soil shall be deemed too wet for vehicular use.
6. The staging area(s) will be situated with good, safe access to county roads or state highways. The fuel truck for the helicopter will also be utilized at the staging area(s).
7. The staging area(s) shall be kept clean and free of litter. Appropriate human waste facilities will be provided and properly maintained. Such waste facilities shall be removed from the site upon completion of the project.
9. Operators of vehicles and equipment shall be responsible for not damaging fences and keeping gates as found. As a last resort, should a fence be cut for access, that fence must be repaired to former or better condition, after equipment has passed through.

10. Shot holes will be backfilled and plugged, in accordance with state regulations, after they are loaded with the explosive charge. Any cuttings resulting from shot hole drilling and not used in backfilling the shot hole will be scattered about the immediate area to blend with natural terrain and reduce visual impacts.

11. Geophysical equipment may encounter congested areas with trees requiring one or more trees to be removed and or limbed. If such action is needed then the tree(s) and or limb(s) shall be less than eight (8) inches at diameter breast height (dbh) or at the base of the branch. Trees to be cut or limbed which are located adjacent to public roads, communities and or public facilities shall be immediately cut into smaller pieces so that it is not aesthetically displeasing and dispersed within the immediate vicinity.

12. Any and all tire tracks one hundred feet (100'), leading away from an established dirt or two-track road situated on public lands, will be hand raked to blend into the surrounding soil surface.

13. If soil is disturbed to the extent that erosion is likely or visual impacts are readily apparent, the disturbed areas will be rehabilitated utilizing the following techniques:

Ruts and vehicle tracks will be filled with soil and/or obliterated by either hand raking or similar method. When completing this work, care will be taken to minimize disturbance to surrounding lands that have not been disturbed. All areas where rehabilitation work is accomplished will be reseeded with the seed mixtures specified below:

SEED MIX FOR RECLAMATION

Western Wheatgrass	<i>Pascopyrum smithii</i>	6.0 lbs PLS**/acre
Bluebunch Wheatgrass	<i>Pseudoroegneria spicata</i>	6.0 lbs PLS/acre
Slender Wheatgrass	<i>Elymus trachycaulus</i>	6.0 lbs PLS/acre
	<i>Ssp: trachycaulus</i>	
Canby bluegrass	<i>Poa canbyii</i>	2.0 lbs PLS/acre
Indian ricegrass	<i>Achnatherum hymenoides</i>	<u>4.0 lbs PLS/acre</u>
	TOTAL	24.0 lbs PLS/acre

Seeding rates are for broadcast seeding. If drilled, seeding rates may be halved.

** PLS = pure live seed

The seeded area should be hand raked to assure the seed is covered with approximately ¼ to ½ inch of soil. This seeding should be accomplished during the late fall, in October or November.

The seed shall be certified, pure live seed, and seed tags must be available if requested by the authorized officer. Certified weed free seed is to be used to rehabilitate disturbed land.

14. Setbacks and Buffers: the operator will adhere to setbacks or "buffer zones" that are set forth in the following tables.

Illustration 16, Page 3

**H-3150-1 - ONSHORE OIL AND GAS GEOPHYSICAL EXPLORATION
SURFACE MANAGEMENT REQUIREMENTS (PUBLIC)**

**Offset in Feet, from Certain Objects
(based on pounds of explosive charge)**

Object	½ lb	1 lb	2 lbs	3 lbs	5 lbs	6 to 10 lbs	11 to 15 lbs	16 to 20 lbs
Pipeline less than 6" diameter	50'	100'	150'	150'	200'	250'	300'	400'
Pipeline 6" to 12" diameter	75'	150'	200'	200'	300'	400'	500'	600'
Pipeline greater than 12" diameter	100'	200'	250'	250'	300'	500'	600'	800'
Telephone line	20'	20'	30'	40'	40'	50'	50'	50'
Railroad Track or main paved Highway	50'	100'	150'	150'	150'	220'	280'	350'
Electric Powerline (Shot holes not to exceed 200' depth)	75'	100'	200'	200'	200'	200'	250'	300'
Water wells, buildings, underground cistern, and all other similar objects	225'	300'	400'	450'	700'	800'	1000'	1200'
Brick and/or concrete block buildings	275'	400'	500'	600'	800'	1000'	1200'	1500'
Producing oil and gas well	250'	450'	600'	700'	800'	900'	1000'	1000'
Irrigation wells	500'	800'	1000'	1200'	1500'	2000'	2500'	2500'

Minimum Safe Offset in Feet for Vibrator Truck Operations

Structures	Distance (ft)
Residences, Buildings, Concrete Base Structures	300
Water Wells	350
Concrete Water Pipeline	100
PVC/Plastic Water Pipeline	20
Oil or Gas Well	250
Oil or Gas High Pressure Pipelines	30
High Voltage Power Lines	0
Local Transmission Power Lines	0

15. No equipment, only foot traffic laying receiver lines, will be used in swampy/wetland areas.

16. If any unanticipated prehistoric or historic archaeological sites or paleontological sites are encountered during the geophysical work, the work shall stop and the appropriate BLM archaeologist at the Field/District Office will be contacted. If a site is found, it will be recorded. The BLM will assume responsibility for evaluation and determination of significance, related to the historical or archaeological site. All known cultural resources sites will be avoided. Collection of any cultural or paleontological artifacts, bones or fossils from Federal lands is specifically prohibited.

17. Visible migratory bird nests will be avoided and not disturbed.

18. All equipment will be power washed prior to entering Federal lands to help mitigate the spread of noxious plants.

19. In order to minimize watershed damage and disturbance to game animals utilizing important seasonal wildlife habitat, seismic activity will only be allowed during the period from May 15 to December 15. Exceptions to this limitation may be specifically approved by the authorized officer.

20. When fire conditions reach high, the helicopter, vehicles, and equipment will carry water, shovels, and other fire fighting equipment to extinguish any fires that are accidentally started by the seismic operations.

21. If oil, lubricants and other petroleum or man-made products are accidentally spilled onto the ground surface, the BLM will be contacted and provided specific information about the spill and/or leak. Spills or leaks will be cleaned from the soil and any contaminated material will be bio-remediated or disposed of at an authorized landfill.

22. All flagging, lath, pin flags, and similar materials used in the seismic project will be removed from public land and disposed of at an authorized landfill.

23. All Applicant-Committed Environmental Protection Measures documented in the applicant's NOI will be complied with in addition to these terms and conditions.

MITIGATION

Operations will not occur during the peak migratory bird nesting period: May 1st to July 15th.

No operations will be allowed on BLM from March 1st (or when breeding sites start to become occupied—usually as snow melts off) to June 30th.

If any unmapped water sources are found during surveying or seismic operations, then every effort should be made to avoid these areas.

Any water needs for seismic operations must be obtained from private sources and no fluids will be disposed of on federal lands.

Shot holes will be plugged in a manner to protect ground water quality, if encountered. If any unmapped water sources are found during surveying or seismic operations, every effort will be made to avoid these areas.

Operations will limit surface disturbances and use existing roads wherever possible. Damage created by vehicles will be repaired by the proponent.

Any user created roads created during the project will be reseeded and reclaimed.

All motorized equipment will avoid springs, wetland and riparian zones. Any lines that cross these areas will be hand laid, and shot holes will be located away from spring sources.

Operations will cease except on graveled maintained roads when soil conditions are wet and rutting is occurring. If areas of rutting do occur, the operator is responsible for blading the roads. Off road areas such as staging areas may need to be ripped if excessive compaction or rutting has occurred prior to reseeding.

The proposed project area will be pre-surveyed using maps and air photos to identify prospective bed rock outcrops, and will include a drive through to field check the identified areas and identify other areas that have bed rock exposures of the Coalmont and Pleistocene fm. This review will include both BLM-administered and split-estate lands.

A pedestrian inventory will be completed for both BLM and spit-estate lands for identified bed rock exposures correlated with those areas identified for shot holes, staging and ground disturbance.

Any identified shot points that will have an impact on fossil resources will be relocated or abandoned.

Operations will avoid sites 5JA1889, 5JA1891, 5JA1892, and 5JA1893 by 500 feet because these sites contain prehistoric rock built features. Site 5JA1886 (5JA202) already has a live dynamite charge in a drill hole and must be accessed on foot. The site must be avoided by 200 feet. All sites will be monitored and re-inspected by GRER's Archaeological consultant.

The holder shall immediately bring to the attention of the Authorized Officer any and all antiquities, or other objects of historic, paleontological, or scientific interest including but not limited to, historic or prehistoric ruins or artifacts DISCOVERED as a result of operations under this authorization (16 U.S.C. 470.-3, 36 CFR 800.112). The holder shall immediately suspend all activities in the area of the object and shall leave such discoveries intact until written approval to proceed is obtained from the Authorized Officer. Approval to proceed will be based upon evaluation of the object(s). Evaluation shall be by a qualified professional selected by the Authorized Officer from a Federal agency insofar as practicable (BLM Manual 8142.06E). When not practicable, the holder shall bear the cost of the services of a non-Federal professional.

Within five working days the Authorized Officer will inform the holder as to:

- Whether the materials appear eligible for the National Register of Historic Places;

- The mitigation measures the holder will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
- A timeframe for the Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the Authorized Officer are correct and that mitigation is appropriate.

If the holder wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the Authorized Officer will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the holder will be responsible for mitigation costs. The Authorized Officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the Authorized Officer that the required mitigation has been completed, the holder will then be allowed to resume construction.

Antiquities, historic, prehistoric ruins, paleontological or objects of scientific interest that are outside of the authorization boundaries but directly associated with the impacted resource will also be included in this evaluation and/or mitigation.

Antiquities, historic, prehistoric ruins, paleontological or objects of scientific interest, identified or unidentified, that are outside of the authorization and not associated with the resource within the authorization will also be protected. Impacts that occur to such resources, which are related to the authorizations activities, will be mitigated at the holder's cost.

Pursuant to 43 CFR 10.4(g), the holder of this authorization must notify the Authorized Officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the Authorized Officer.

DESIGN FEATURES

1. The BLM will monitor the project area for the establishment or spread of invasive, non-native species after the project is completed. If invasive, non-native species become established or spread as a result of the Proposed Action; GRER will be responsible for their control.
2. If the amount of surface disturbance is over 1 acre, the applicant is responsible for obtaining a stormwater permit or waiver as required under the Clean Water Act and administered by the State of Colorado, and complying with any other federal or local regulations.

Attachment 2

BLM Water and Wetland Concerns in T. 6-7 N., R. 80-81 W., 6th P.M.

